

SWITCHING REGULATOR WITH MULTIPLE POWER TRANSISTORS DRIVING VOLTAGES

ABSTRACT

A voltage regulator has an input terminal, an output terminal, a first transistor connecting the input terminal to an intermediate terminal, a second transistor connecting the intermediate terminal to ground, a controller that drives the first and second transistors to alternately couple the intermediate terminal between the input terminal and ground, and a filter disposed between the input terminal and the output terminal to provide a substantially DC voltage at the output terminal. The controller drives the two transistors with different gate voltage, and the two transistors can have different gate oxide layer thicknesses.

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